

REMARKS

Applicant's undersigned counsel appreciates Examiner Tran's careful and thorough examination of the present application, which currently has four independent claims pending, namely claims 1, 17, 25 and 27. Claim 1 has been amended to more specifically point out the invention applicant has claimed. Claim 17 has been amended to include reference to a composite insulation zone and claim 25 has been amended to include reference to a composite insulation zone and strain isolation layer.

The above-mentioned independent claims, claims 1, 17, 25 and 27, have been rejected under 35 USC §102(b) as being anticipated by Haselkorn et al. (U.S. 6,161,379). The rejection is respectfully traversed in view of the amended claims now pending.

Contrary to the Examiner's assertion, Haselkorn is completely missing the strain isolation layer disposed between the composite zone and the outer structural layer as claimed in the currently-amended independent claims 1, 17 and 25. In particular, the insulating elements (10,12) cannot be both the strain isolation layer and the composite insulation zone as asserted by the Examiner. In Haselkorn, the elements (10,12) are insulating elements, with no mention of any function or capability to dampen unmatched thermal expansion between adjacent layers, as a strain isolation layer would do. Moreover, both insulation elements (10,12) are commonly discussed in Haselkorn as having the same purpose and being of the same construction. In contrast, the strain isolation layer of the present invention has a different function, and therefore a different construction, from the insulation zone, namely to absorb or dampen vibrational stresses to accommodate the unmatched thermal expansion characteristics of the claimed outer layer and the claimed composite insulation zone [par. 0049 as published]. In this regard, the strain isolation layer must be of different construction (different material) from the insulation zone to ensure that it does not fracture due to the expansion and contraction of the outer layer from thermal cycling in the same manner the insulation zone would fracture if the unmatched expansion between the outer layer and insulation zone were not damped [par. 0049 as published]. In other words, if the strain isolation layer were made of the same material as the composite insulation zone, instead of damping unmatched thermal expansion it would simply fracture due to such expansion.

Because the claimed strain isolation layer performs a different function than the composite insulation zone, which is comparable to the insulation elements (10,12) in Haselkorn, and the strain isolation layer is therefore necessarily of different construction than the claimed composite insulation zone, Haselkorn cannot be considered as teaching a strain isolation layer as claimed in independent claims 1, 17 and 25. Layers (10,12) in that references are the same.

Not only can the insulating elements (10,12) of Haselkorn not be the claimed strain isolation layer as asserted by the Examiner, but no other element in Haselkorn satisfies the requirements of the claimed strain isolation layer in the form of an intumescent mat as claimed in claims 6-11 and 17-22. The Examiner points to several descriptions in Haselkorn (col. 3, lines 40-67; col. 4, lines 1-67; col. 5, lines 1-40) as purportedly teaching a strain isolation layer in the form of an intumescent mat as claimed in the present invention. However, Haselkorn only sets forth that various of its disclosed elements may have fibrous or quilted construction. While it is questionable whether a fibrous or quilted construction is the same as a mat, the distinguishing characteristic of the claimed intumescent mat of the present invention lies not in its matted construction, but rather in the fact that it has intumescent properties, i.e. it will swell upon heating and rebound upon cooling. The result of these competing swelling and rebounding effects is a compliant, resilient intumescent mat that protects the claimed composite insulation zone as described above. Thus, while it is questionable whether Haselkorn teaches a mat construction, it is readily apparent that Haselkorn does not teach a mat with the aforementioned intumescent properties. Thus, Haselkorn cannot anticipate the strain isolation layer in the form of an intumescent mat as claimed in claims 6-11 and 17-22 for this additional reason.


With respect to independent claim 27, the Examiner has asserted that the metallic ring elements 2 and 14 of Haselkorn are the same as the claimed O-ring gasket. Applicant respectfully disagrees. Haselkorn teaches two metallic rings (2,14) present at the terminal ends of the manifold for the purposes of casting, for example, for ensuring no excessive stresses remain in the casting after solidification [col. 3, lines 34-36] and/or for venting to prevent large porosity defects during casting [col. 5, lines 1-5]. In contrast, the claimed O-ring gaskets of the present invention are present within the

manifold main tube portion at opposite sides of each claimed runner [par. 0074 as published]. These claimed O-ring gaskets are present in addition to sealing gaskets present at the terminal end of the manifold [par. 0074 as published], and are made of suitably flexible materials [par. 0067 as published] rather than metal as is taught for the metallic rings (2,14) in Haselkorn. Furthermore, the purpose of the claimed O-ring gasket is to prevent turbulent exhaust gases from escaping through the claimed composite insulation zone during operation [0074] rather than for allowing venting during casting as further taught for the metallic rings (2,14) in Haselkorn. For at least these foregoing reasons, it should be clear that Haselkorn does not teach the claimed O-ring gasket of claim 27.

Because Haselkorn does not teach each and every element of the independent claims of the present application, it is respectfully submitted that the rejections thereof have been overcome. All remaining claims are dependent claims. Thus, applicant believes the application is now in condition for allowance and respectfully requests the same.

If there are any required fees that are not covered, please charge said fees to our Deposit Account No. 16-0820, Order No. 36452US1.

Respectfully submitted,
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